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Assessment of Private Paravets Practices towards Veterinary Extension Services in Nepal

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Abstract

The study aims to assess the performance of paravets towards veterinary extension services in Nepal. The participatory methods like questionnaire survey, key informant interview, focus group discussion, direct field observation, force field analysis and score ranking was adopted during the study. The quality of the Private Paravets was sound in terms of relevance, appropriateness, targeting, and sustainability issues. Project activities associated with Private Paravets promotion were observed appropriate and in line with the needs of farmers. The concerned private paravets were found to be working effectively for institutional, social and economic transformation of the beneficiaries. Large majority of the Paravets have been providing veterinary service on technical advice, curative services (98 %), AI (87 %) and vaccination (75%) against hemorrhagic septicaemia and black quarter diseases in the cattle and buffaloes. There has been increased access to veterinary extension services in the rural farming communities because of increased accessibility to Paravets. In the study areas 89 %paravets have annual turnover of Rs less than 2 lacsto3-5lacs in their fee based private veterinary services. Overwhelming majority of the Paravets had future plan to expand their business. Of the total 96 % Paravets expressed job satisfaction for their current veterinary private practices despite some problems. The private paravets seems to be instrumental and sustainable to provide services towards veterinary and livestock production technology in the study areas. However, there is room for improvements to make it economically viable, technically sound, legally regulated and developing professional ethics as Paravets practices in Nepal.

Keywords: Approachable, Community, Livestock, Paravets, Sustainable

Introduction

Background

Agriculture is the major sector of Nepalese economy. It provides employment opportunities to around 65 percent of the total population and contributes about 27 percent in the Gross Domestic Products. Therefore,

the development of agriculture and livestock sector is key for the development of national economy(MOAD, 2020).Livestock are domesticated animals raised to produce milk, meat, eggs, wool, labor, etc. In Nepal Livestock and its products like milk, meat, and hides, contribute 11.5 % of national

GDP (CBS, 2011), and 25.68% of the agricultural GDP (MoAD, 2014). It is also an integral part of Nepalese farming, providing draught power, fertilizer and household fuel. Oxen and male buffaloes are used for hauling and transport of agricultural products and inputs. In the hills and mountains, mules, yaks, sheep and goats make an important contribution as pack animals. It is main source of animal protein and household cash income. Livestock sub-sector has becoming as a commercial enterprise for self-employment and sustainable livelihoods across the country.

Paravets are those community-based extension workers who assist a veterinary physician in the performance of their duties, or carry out animal health care autonomously as part of a veterinary extension services. In Nepal, paravets are providing veterinary services, livestock development works and front line agricultural extension workers in rural areas. They are popular among the farmers because of easily accessible, cost-effective and community-based technician.

Suvedi and McNamara (2012) stated that the Nepal agriculture policy (2004) recognized Nepal's extension system as pluralistic in nature. In the public sector, extension is provided under the Department of Agriculture and Department of Livestock Services. However, extension is provided by the Council for Technical Education (CTEVT), Agriculture and Forest University, and Tribhuvan University (TU). In addition, the private sector plays an active role in offering improved seeds, pesticides, and artificial insemination for livestock among other services (Suvedi and McNamara, 2012). Likewise, there are a number of NGOs, especially in the remote areas

that provide extension services to farmers in Nepal (Jaishi, Nepali and Shahi, 2018). However, the veterinary extension coverage is not sufficient to make a difference in the life of rural farmers. Thapa (2019) has pointed out that the agricultural extension service provided by the Government of Nepal has received by only 13 % households in the study area (Thapa, 2019, P 159).

Claire Heffernan and Pilling, D (2002) pointed out that the livestock development has recognized the need to prioritize efforts to help alleviate poverty. Although there is now a concerted effort to direct development research activities at poverty alleviation, there are still a number of potential stumbling blocks. First, little information exists as to how the poor view livestock-related livelihoods in general or livestock disease more specifically. Secondly, the factors that are important to the uptake of animal health technologies are often not known. Researchers compared the findings of a previous project (delivering veterinary services to the poor) to other work on prioritization. The analysis showed that there are large differences in livestock disease reporting between the experts and the poor as illustrated in the table for India below (Fig. 1). Equally, there are further differences among income groups and genders: hemorrhagic septicaemia (HS) is ranked as a more significant problem by the better off, while diarrhea was more important for the poor; women prioritize livestock diseases that affect household income, e.g. mastitis, whereas men tend to rank diseases with high mortality rates. Hence, the analysis has revealed the wide differences in perceptions and opinions of the different stakeholders (Claire Heffernan and Pilling, D., 2002).

Figure 1:
Disease priorities reported by different groups in India

The Poor (n=1314)	The Vets (Ram Kumar, 2002)	The Experts (Perry et al., 2002)
FMD	Reproductive disorders	FMD
Diarrhea	Mastitis	Reproductive disorders
Fever	Digestive disorders	Toxicara vitulorum
Hemorrhagic septicaemia	Parasitic disease	Brucella abortus

Source: Claire Heffernan and Pilling, D. 2002

The concept of efficiency, effectiveness, relevance, and sustainability has been briefly described below.

Efficiency: The purpose of the efficiency is to measure the programs or projects in terms of results at the community level through planned programs or projects. An assessment of the results of the project or program in relation to the resources used and time taken is called efficiency.

Effectiveness: The purpose of the effectiveness is to measure to make a difference in the life and livelihoods of the local targeted people through planned programs or projects. The extent to which the objectives have been achieved as a result of the project or program itself, and the extent to which other factors have influenced the results. A consideration of the wider context in which projects and programs operate should be an integral part of the evaluation.

Impact is assessing changes that have occurred in the lives of the intended rightholders, and the forces and influence that have contributed to bringing about these changes. These may be project related and wider forces and influences. Impact on other people should also be considered. The changes occurring may be positive or negative, intended or unintended. The impact may differ for women and men, people of different ages, different ethnic groups and other social groupings, so the analysis should consider different groups separately. Consideration should also be given to whether costs can be assessed in relation to importance.

Relevance: The purpose of the relevance is to measure in terms of need and priority of the local people, government policy, long term plan and priority programs. Relevance is defined as the extent to which the project or programme objectives are valid and appropriate to the priorities and needs of the rightholders. Was the original problem analysis comprehensive enough and is it still relevant? Is the project purpose relevant and will it solve the problem? Are the stakeholders relevant to the problems, objectives and long term sustainability (Thapa, 2018)?

Sustainability: The purpose of the sustainability is to long lasting of programs for the benefit of people. The extent to which considered in relation to the project or program can be continued in an appropriate way after outside funding support has discontinued (Thapa, 2019).

TLDP (2004) has mentioned that the promotion of private veterinary and breeding services started with TLDP (Third Livestock Development Project) intervention back in late 90's. During this period, 30 Paravets were trained and 27 supported to start veterinary and Artificial Insemination services (TLDP, 2004). Based on the success of TLDP, Community Livestock Development Project (CLDP) has also been promoting paravets with the main objective of expanding veterinary and AI services. The CLDP trained a total of 222 Private Vets/Paravets and supported 152 of them until the end of 2010 (CLDP, 2010).

Many of the Paravets promoted by TLDP have expanded their services. Similarly, the performance of most Paravets promoted by CLDP is rated satisfactory, while some are lagging behind in their businesses due to poor skills and low business leadership. It has also been reported that many project supported Paravets have expanded their services by recruiting peers and Village Animal Health Workers due to high demanded by the community and livestock farmers.

Specific objectives

The following specific objectives have been set to map out the performance of Paravets:

1. To assess the performance of private paravets in terms of quality of technical services; and
2. To analyses the sustainability of the business, efficiency, effectiveness, lessons learnt and challenges of the paravets for the private veterinary extension services in Nepal.

Methodology

Approaches to the study

Exploratory research design was adopted to collect the primary data from the study areas. The qualitative and quantitative methods were adopted during field study. Data management and analysis was carried out by using simple arithmetical calculations. The gender equity and social inclusion, participatory and approaches were adopted during the field study.

Context

Study site was selected through the mutual understanding between Community Livestock Development Project team and researcher where there is livestock development program. A total of 11 districts were included for the study. These are Morang, Siraha (Province one), Lalitpur, Chitwan (Bagmati province), Kaski, (Gandaki Province), Nawalparasi, Rupandehi, Bardiya (Province five), and Surkhet, (Karnali Province), Dadeldhura and Kanchanpur district (Sudurpaschim Province). These districts represented the Hills and Terai agro-ecological zones in order to capture the information. The area was well stratified to capture the diversified information in terms of ecological setting, caste/ethnicity, accessibility, market etc. The purposive sampling was adopted to select the study areas due to limited time and resources.

Data Collection

Questionnaire Survey

The questionnaire survey research method was used to collect the information from the respondents. A total of 53 Private Paravets (including one Private veterinarian) working in the selected districts were surveyed by administering structured questionnaire developed by researcher to conduct the study among the Private Paravets. The draft questionnaire was pre-tested in Lalitpur district and finalized before the actual field study to make more practical and minimize the errors.

Meeting with concerned stakeholders

Meeting with field staff, and District Livestock Service Offices, and rightholders was organized to

map out their perceptions towards quality services provided by private Paravets in veterinary service, artificial insemination (AI) and fodder development issues, key achievement, good practices and areas for improvement etc. Review of previous evaluation reports, annual reports, documents and financial management systems and any other documents related to the study was undertaken.

Focus Group Discussion

A total of 17 Focus Group Discussion (FGD) was carried out (1-2 FGD per district) to map out the community perception towards Paravets practices in each district. A total of 8- 12 farmers and concerned livestock entrepreneurs were gathered in one place to discuss about their issues related to veterinary services and livestock production etc. The perceptions mapping and challenges and other problems related to private veterinary extension services etc.

Score and Pair wise Ranking

The participatory learning and action tools like score and pair wise ranking to identify the preference of farmers, DLSOs and private paravets towards veterinary practices was used during the field study. These tools were found effective to explore the qualitative information from the respondents.

Data Analysis

A simple analysis such as editing, coding, classification, tabulation and percentage was done. The gender equality and social inclusion, and effectiveness of service provider were taken into account to measure the performance of Private Paravets. There has been complementarity between the qualitative and quantitative information to verify the performance of the Private Paravets practices. Quantitative Research is used to quantify the problem by way of generating numerical data or data that can be transformed into usable statistics. It is used to quantify attitudes, opinions, behaviors, and other defined variables – and generalize results from a larger sample population. Quantitative Research uses measurable data to formulate facts and uncover patterns in research. Qualitative Research is primarily

exploratory research. It is used to gain an understanding of underlying reasons, opinions, and motivations. It provides insights into the problem or helps to develop ideas for potential quantitative research. Qualitative Research was also used to uncover trends in thought and opinions, and dive deeper into the problem (Thapa, 2018).

Findings

This chapter analyses the overall performance of private vet/paravets by using descriptive statistics

and qualitative tools of Participatory Learning and Action (PLA) and perceptions mapping of the stakeholders.

Age

The majority of the paravets (79 %) were between 21-40 years of age while 21 per cent were between the ages of 41-60. Overwhelming majority of 1 Private Paravets fall under the category of economically active population (Table 1). The mean age of the paravets was 34 years.

Table 1
Distribution of Paravets by Age Group (N=53)

Age (years)	Frequency	Percentage
Below 20	0	0
21-30	26	49
31-40	16	30
41-50	9	17
51-60	2	4
Total	53	100

Source: Field study, 2010

Sex Composition

Of the total sampled population 88 per cent were men and 12 per cent (Table 2) were women. The population of women Paravets was low as compared

to men paravets due to less women literacy and patriarchal social structure. The women Paravets were relatively more confined in urban and peri-urban areas.

Table 2
Distribution of Paravets by Sex and Districts (N=53)

District	No. of Man	No. of Woman	Total
Morang	7	0	7
Siraha	2	0	2
Chitwan	6	0	6
Nawalparasi	10	0	10
Rupandehi	9	1	10
Bardia	2	1	3
Surkhet	0	2	2
Kanchanpur	4	0	4
Dadeldhura	1	0	1
Kaski	2	0	2
Lalitpur	4	2	6
Total	47	6	53
%	88 %	12 %	100%

Source: Field study, 2010

Caste/Ethnicity

The private paravets came from various caste/ ethnic groups. During the study, Brahmin, Chhetri and Janajati were represented as 72 per cent, 8 per cent

and 20 per cent respectively out of 53 private paravets. The participation of Dalits community in paravets practices was non-existent.

Table 3

Distribution of Paravets by Caste/Ethnicity (N=53)

Caste/Ethnicity	Frequency	Percentage
Brahmin	38	72
Chhetri	4	8
Dalits	0	0
Janajati	11	20
Total	53	100

Source: Field study, 2010

Marital Status

Across the eleven districts large majority of paravets (81%) were married (Table 4). The field observation shows that those couple who married between

paravets have found effective service providers due to sharing of knowledge, skills, experiences, role and responsibilities etc in daily professional work.

Table 4

Distribution of Paravets by Marital Status (N=53)

Marital status	Frequency	Percentage	Total
Married	43	81	43
Unmarried	10	19	10
Total	53	100	53

Source: Field study, 2010

Educational Status

The level of education varied between the private paravets. Majority of the paravets (90%) has pursued Junior Technical Assistant/Junior Technician level course (Table 5). Remaining Private vets were represented as BVSC& AH/Bachelor degree holders (8%). Almost all paravets have acquired basic knowledge and skills on veterinary science and animal husbandry having 18 months course from

CTEVT (Council for Technical Education and Vocational Training). However, there is always room for professional improvement to enrich the quality of work. It was interesting to see that a few master level degree holders in education faculty have adopted private veterinary practices as a profession to sustain his/her livelihoods because of good income from this profession.

Table 5

Distribution of Paravets by Educational Status (N=53)

District	JTA/SLC passed	JT/IA passed	BVSC & AH/BA	MA passed	Total
Morang	6	0	1	0	7
Sirah	1	0	1	0	2
Chitwan	3	3	0	0	6
Nawalparasi	8	2	0	0	10
Rupandehi	6	3	1	0	9
Bardia	0	2	0	0	3
Surkhet	2	0	0	0	2
Kanchanpur	4	0	0	0	4
Dadeldhura	1	0	0	0	1
Kaski	1	1	0	0	2
Lalitpur	4	1	0	1	6
Total	36	12	4	1	53
%	68%	22%	8%	2%	100

Source: Field study, 2010

Socio-economic well being of Paravets

Veterinary mid-skilled technicians generally come from middle to lower middle class families. It was found that the large majority of paravets (72 %) belonged to socio-economically middle class family while 28 per cent were from low socio-economic well-being category (Table 6). The private practice

business has been more instrumental in socio-economically low and middle class category to generate income by selling goods (veterinary drugs) and services. The field observation revealed that the well-being of the many private paravets has been significantly improved as compared to previous one because of current veterinary practices as a profession.

Table 6

Distribution of Paravets by Socio-economic well being (N=53)

Districts	Low	Medium	High
Morang	3	4	0
Sirah	1	1	0
Chitwan	3	3	0
Nawalparasi	4	6	0
Rupandehi	1	9	0
Bardia	1	2	0
Surkhet	0	2	0
Kanchanpur	0	4	0
Dadeldhura	0	1	0
Kaski	1	1	0
Lalitpur	1	5	0
Total	15	38	0
%	28%	72%	

Source: Field study, 2010

Previous Profession

Before CLDP training majority of the paravets were operating agrovet shops (53 %). Rests were involved in farming (28 %), and government employment (15

%). It can be assumed that there is high possibility that they will continue their business in the future because of directly related previous background to the current profession (Table 7).

Table 7

Distribution of Paravets by previous profession (N=53)

Previous Profession	Frequency	Percentage
Agrovet	28	53
Farmer	15	28
Teacher	2	4
Government job	8	15
Total	53	100

Source: Field study, 2010

Received Training by Paravets

Most of the paravets received Veterinary JTA training (92 %) from CTEVT (Table 8). These CTEVT graduated technicians were further trained by CLDP in practice management as an enterprise, veterinary technical skills and artificial insemination (AI) 94 %). These training have been instrumental in developing confidence both in technical and business management aspects. However, they have demanded

for additional new trainings on newer areas of veterinary discipline such as skills to deal with the cases of bird flu, swine flu, enhancing laboratory skills for disease diagnosis, ethno-veterinary medicines/Indigenous technical knowledge on veterinary care and refresher trainings on AI to increase the knowledge and skills directly related to veterinary practices.

Table 8

Distribution of Paravets by Received Training (N=53)

Training Activities	Frequency	Percentage
AI Training	50	94
Lab Test	13	24
Training of trainers	1	2
Vet JT/JTA Training	48+1	92
Others	39	73

Source: Field study, 2010

Household and VDC Coverage by Paravets

Large majority of paravets provided the veterinary services in 2-6 Village Development Committees covering 2000-5000 households as per farmers

demand on fee payment basis as a reasonable service charge (Table 9). The coverage of villages and households by the paravets depend upon the reliability of services and credibility among the farmers.

Table 9
Distribution of Paravets by Household & VDC Coverage (N=53)

Districts	No. of VDC Coverage				No. of household coverage			
	1	2-3	4-5	>6	<500	600-1000	1100-2000	2000-5000
Morang	0	1	3	3	1	0	1	7
Sirah	1	1	1	1	0	0	0	2
Chitwan	0	2	3	1	2	0	3	1
Nawalparasi	0	3	3	4	1	2	0	6
Rupandehi	0	5	5	2	5	2	4	2
Bardia	1	1	0	1	1	0	1	1
Surkhet	0	0	0	2	1	0	0	1
Kanchanpur	0	2	0	0	1	0	1	0
Dadeldhura	1	0	0	0	1	0	0	0
Kaski	0	1	0	1	1	0	0	1
Lalitpur	1	1	2	2	4	2	0	0
11	48	17	17	17	18	6	10	21
		32	32	32	34	11	19	39

Source: Field study, 2010

Type of Service Provided by Private Paravets

The large majority of paravets are providing service on technical advice (100 %), curative services (98%), AI (87 %), vaccination (75%) against hemorrhagic septicaemia and black quarter diseases in the cattle

and buffaloes and lab test (60%). In the Kathmandu Valley, paravets have also provided Distemper vaccination in pet animals. Generally lab test include fecal examination for parasitological cases (Table 10).

Table 10
Distribution of Paravets by type of service provided (N=53)

Districts	AI	LabTest	Vaccination	Curative service	Tech. Adv.
Morang	7	4	7	7	7
Sirah	1	1	2	2	2
Chitwan	6	4	5	6	6
Nawalparasi	10	6	8	10	10
Rupandehi	10	6	10	9	10
Bardia	1	2	2	3	3
Surkhet	1	1	-	2	2
Kanchanpur	4	3	1	4	4
Dadeldhura	-	0	-	1	1
Kaski	2	2	1	2	2
Lalitpur	4	3	4	6	6
Total	46	32	40	52	53
%	87%	60%	75%	98%	100%

Source: Field study, 2010

Level of Quality Services

Majority of Paravets assessed their own service provided to the farm community as good (60%), very good (32%) and excellent (8%) in terms of the quality of the service perceived by themselves (Table 11). There has been increased access to veterinary extension services in the rural farming communities because of increased accessibility of Paravets in rural communities. So Paravets could be regarded as "Doctor Saheb" as farmers mostly call them with due respect. They are more approachable, accessible,

proximity to smallholder farmers and affordable. Furthermore, they were instrumental to alleviate poverty in the rural areas of Nepal. However, there is room for improvement in terms of professional development, legal provision and regular action review and reflections, participatory monitoring and evaluation etc. There has been some role illusion between paravets and veterinarians in terms of roles, responsibilities and relationships in dealing with clients due to lack of Paravets Act (legal provision) as reported by paravets.

Table 11
Distribution of Paravets by level of quality Services (N=53)

Rating of Quality Service	Frequency	Percentage
Excellent	4	8
Very good	17	32
Good	32	60
Fairly Good	0	0
Low	0	0
Total	53	100

Source: Field study, 2010

A case study of a Paravet has been presented below:

Case study 1: Ram Prasad Shapes his life through Paravet profession

Ram Prasad Neupane, 30, is a resident of Atgua -6, Maulipokhara Argakhachi. He completed the JTA course in 2056. He worked as volunteer in Livestock Service Centre, Argakhachi. He worked around one year in own clinic at Rampur, Bardiya. He started Muna vet Pharma since 2061 in Patan, Lalitpur. Muna vet is providing home service on distemper and rabies vaccination in pet animals. He charges Rs 500 for rabies and distemper vaccination. The annual turnover of business is Rs 600,000. He gets 15-25 % profit from the business. He is being interested to run the private vet practices because of self-employment and Wider scope to generate income.

When he was asked on how you could improve your business in the future? He replied that, he would like to take agriculture loan of Rs 600,000 to expand the business in the future and training on treatment of pet animals. He further added that on the whole paravets has contributed for poverty reduction by providing veterinary services to the smallholder livestock farmers as "Bare Foot Veterinarians". The paravets have encouraged the Gulf countries returnees to start livestock enterprises for income generation within country. They are succeeded to get income from the livestock enterprises. There is high scope of dairy in Lalitpur so Paravets should be trained in hygienic milk production and milk products as perceived by Mr. Neupane. He added that the Paravets should also focus on large animals care and management despite pet animals.

Affiliation with Paravet Association

The most of the paravets (89 %) have been affiliated with Paravet Association to assert their rights and professional development (Table 12). The Paravet Association has been expanded across the country as district chapters are established in 75 districts of Nepal. The central executive committee comprises of 11 members including two women. The Paravet Association, Central Committee office has been based in Tripureshwar, Kathmandu. It was established in 2047 B.S. A total of nine thousand paravets

received membership from Paravet Association to date. Paravet association has begun establishing institutional process of mobilizing paravets in terms of delivery of service, organizational development and developing networks with private veterinary drug companies etc. Around ten per cent women have participated in Paravet Association as reported by Lalitpur District Chapter. However, there is a need of development of professional ethics among the paravets.

Table 12
Distribution of Paravets by Member of Paravet Association (N=53)

Association	Frequency	Percentage
Membership	47	89
Non-membership	6	11
Total	53	100

Source: Field study, 2010

Paravets involvement in FMD, Bird flu, and Swine Flu prevention and control

During the study 53 % and 47 % paravets (Table 13) have found engaged in an implementation of

preventive measures/vaccination and advice for prevention of FMD, Bird flu, and swine flu diseases respectively. However, they have yet to be received tailor made training in this area.

Table 13
Distribution of Paravets by Service provider in FMD, Bird flu, and Swine Flu (N=53)

Type of Service	Frequency	Percentage
Vaccination	28	53
Advice for prevention	25	47
Doing Nothing	0	0
Total	53	100

Source: Field study, 2010

Annual Turnover by Paravets

Overwhelmingly large majority of (89 %) paravets have annual turnover of Rs less than o. 2 million to 0.5 million in their private business. The rates of annual turnover of Private vet/Paravets during the

period of five years have been reported (Table 14).The Private vet/Paravets practices have found better performance in the case of urban and Terai areas as compared to rural areas of Hills and Mountains due to increase market access of livestock products.

Table 14
Distribution of Paravets by Annual Turnover (N=49)

Rate of Turnover	Frequency				
	Year 1	Year 2	Year 3	Year 4	Year 5
Less than 2 lacs	33 (67)	17 (38)	09 (18)	07 (14)	05 (10)
3-5 lacs	11 (22)	09 (18)	08 (16)	04 (8)	06 (12)
6-8 lacs	03 (6)	02 (4)	03 (6)	02 (4)	01 (2)
9-10 lacs	01 (2)	0	0	01 (2)	01 (2)
More than 10 lacs	0	0	02 (4)	0	01 (2)

Note: 1:out of 49 samples 37 Paravets from CLDP and 12 Paravets from TLDP included in the analysis

2: Figure in the parenthesis is percentage.

Expansion of Business

Overwhelming majority of paravets have formed future plans to expand their private business in the years to come because of profit-making, having

knowledge and skills on veterinary practices through trainings and working experience in the veterinary services as profession to shape their lives and livelihoods (Table 15).

Table 15
Distribution of Paravets as to Expansion of Business (N=53)

Plan for Business Expansion	Frequency	Percentage
Yes	53	100
No	0	0
Total	53	100

Source: Field study, 2010

Job Satisfaction

Overwhelming majority of the paravets (96 %) expressed satisfied to highly satisfied from their current veterinary private practices due to good scope of work, bread earning and increased social prestige in the community (Table 16). However, there is a need of technical competency, commitment to action,

developing good relations with the livestock farmers, linkage and coordination with DLSOs, contact with non-governmental organizations, veterinary drug companies and establish linkage with local level governments to carry out the private veterinary practices for the economic viability.

Table 16
Distribution of Paravets as to Job Satisfaction (N=53)

Level of job Satisfaction	Frequency	Percentage
Very Little	1	2
Little	1	2
Satisfied	44	83
Highly Satisfied	7	13
Total	53	100

Source: Field study, 2010

Major Challenges Faced by the Paravets

The private paravets have faced the following challenges:

- 1. **Lack of clear policy and procedures:** The clear policy and procedures are not in place to mobilize the private paravets to strengthen veterinary private practices in remote rural areas. There has not been clear cut demarcation of veterinary services and livestock extension services between the private paravets and District Livestock Service Offices in handling of clinical cases. However, the quality of services was reported to be better in case of veterinarians as compared to paravets.
- 2. **Poor action review and reflection process:** There are insufficient regular quarterly action review and reflection workshop/meetings with the private paravets in order to discuss their issues, challenges, sharing of knowledge and best practices among them.
- 3. **Less refresher training:** There is not enough refresher training to paravets especially on AI, veterinary medicines, handling of surgical cases and laboratory test to increase professional development and promotion of private practices.

- 4. **Poor record keeping system:** There is poor record keeping system in case of AI, vaccination and handling of surgical cases that resulted in difficulty in measuring the impact of work done by front line workers in the livestock subsector.
- 5. **No provision of life insurance:** No provision of life insurance of private vets/paravets while handling the high risk cases.
- 6. **Less access to credit:** lack of provision for low interest rate credit remained the limiting factor to expand their business as reported by some paravets.
- 7. **No academic career opportunity:** The career opportunity to increase academic qualification within the country is one of the important limiting factors for the motivation of Paravets. The paravets have no provision of further academic study as career development.

Force Field Analysis

The driving and resisting forces have been identified through discussion with private paravets during the field study which are as follows (Fig.3):

Fig. 3 Force Field Analysis

Driving Forces	Resisting Forces
<ul style="list-style-type: none"> 1. Having basic knowledge and skills on veterinary science. 2. Approachable and proximity to the communities. 3. Bread earning business/cash income to sustain the livelihoods. 4. High demand of veterinary services in the farm communities. 5. Received specialized training on AI, veterinary practices etc. 6. High demand of livestock products in the market. 	<ul style="list-style-type: none"> 1. Lack of clear policy and procedures in private vet/paravets practices. 2. Fewer refresher trainings in order to upgrade their knowledge and skills. 3. No provision of life insurance to the paravets while handling the high risk cases. 4. No academic career opportunity for further study within the country. 5. No reward and punishment system is in place for private paravets practices.

The driving forces need to be strengthened and resisting forces minimized towards achieving sustainability of private paravets practices. The sustainability depends upon the increased level of knowledge, skills, positive attitudes, behavior, enabling policy environment, regular cash income, social prestige, credibility, and commitment to action. The driving forces are stronger as drivers of private paravets practices as compared to resisting forces to

serve the purpose.

Prioritization of treatment by animal species in Rupandehi

Paravets and DLSO staffs were asked to prioritize the treatment of livestock. They ranked first for cattle, second for Buffaloes, third for goat, fourth for Pig and fifth for dog with following reasons (Table 19).

Table 17
Prioritization of treatment by animal species in Rupandehi

Animals	Paravets	DLSO	Total Score	Rank	Reasons
Dog	5	3	8	IV	Hobby
Buffaloes	2	2	4	II	Reasonable milk yield and use of meat
Improved cow	1	1	2	I	High milk yield, cow considered as Laxmi by Hindu
Goat	3	4	7	III	High price of mutton and high market demand
Pig	4	5	9	V	Prolific and good market price of meat

Note: Lower the score higher the preference

Farmers' Perception towards Private Paravets Veterinary Extension Services

Some of the farmer responses are stated below:

“Our Paravet is very good veterinary worker for us. He has been supporting in vaccination, curative services, castration and AI since 2053 in our village. We are satisfied with his veterinary services. I want to go first to meet with Mr. Tripathi to care the sick animals. If the case is complicated he refers to Veterinary hospital” says Dilli Ram Dahal, 30, Hemja VDC ward 7 Kaski, 2010.

“Ms. Sarju Lama-a Paravet has been providing veterinary services in our community since last 3 years. We are satisfied with her veterinary services. I have established the poultry farm from her technical advice. I request her for the vaccination and treatment of poultry "says Tika Lamichhane, 25, Latekoseri, VDC, ward 1, Surkhet, 2010.

When Rokaya was asked about the performance of paravets, he replied “Mr Dharma Raj Joshi-a Paravet is working well. I frequently meet the Paravet for the veterinary services. I am satisfied with the services provided by paravets. The Paravet behavior is also polite and approachable "says Kama Sing Rokaya,, 48, Daiji VDC ward 9, Kanchanpur, 2010.

“The Paravets are working well in our community. A Paravet Mr. Dinesh established a veterinary clinic to serve the needs of farmers. He provided satisfactory veterinary care to the livestock farmers with reasonable service charge. He is available at any time to our service. However, he had no liquid nitrogen container and refrigerator. So we go to Sanoshree clinic to receive AI service. We are satisfied with Paravet services in our village” says Ram Chandra Chapagain, 23, Taratal VDC, ward 8, Bardiya, 2010.

When Ms. Dhimal was asked about the performance of paravets in Morang district, she replied “the paravets are serving the smallholder farmers to care the livestock. They kept veterinary medicines in their clinics for veterinary practices. We call them for the treatment of animals. They provide home service upon our request. The Quality of service is also good” says Kalpana Dhimal, 25, Urlabari VDC ward 9, Morang, 2010.

Conclusion and Recommendations

Conclusion

Livestock plays an important role in rural economy of Nepal. It provides essential source of protein and cash income in the livelihoods of the rural people. The qualities of the Private Paravets have found to be effective in terms of relevance, appropriateness, targeting, and sustainability issues. Project activities associated with Private Paravets promotion were observed appropriate in line with the needs and priorities of rural people of Nepal. The private paravets were found working satisfactorily for their institutional, socio-economic transformation etc. The majority of Private Paravets have found successful in providing private veterinary services to make a difference in the lives of smallholder farmers.

An overwhelmingly majority of the paravets have found Junior Technical Assistant/Junior Technicians. The large majority of the paravets have come from middle class families. This business have found more instrumental in socio-economically low and middle class category to generate income by serving the poor farmers. Overwhelming majority of paravets is providing service on technical advice, curative services, AI and vaccination against bacterial diseases in the cattle and buffaloes. The large majority of the paravets have found good to excellent rating in terms of quality service providers. There has been increased access to veterinary extension services in the rural farming communities because of increased access to paravets. Overwhelmingly large majority of paravets have found handsome amount of turnover in their fee based private veterinary services. The

large majority of the paravets had job satisfaction with some improvements. This research was conducted as sample survey due to limited time and resources. It could not cover across the country particularly in high Mountain areas like Karnali Province. There is a need of policy research and how to use of the Paravets to increase access to veterinary extension services focusing to remote rural areas in the context of Federal Democratic Republic System of Nepal. There is lack of veterinary technical human resource in the rural municipalities to provide extension service at the community level. The veterinary extension service regarded as important technical subject matter to increase household income from the commercial livestock farming.

Recommendations

1. District Livestock Service Offices should organize quarterly action review and reflection meeting with the private paravets to discuss their issues, challenges, sharing of knowledge and best practices among them.
2. There is a need of regular monitoring, reporting and documentation of private paravets by the District Livestock Service Offices to assess the performance in the field.
3. There is a need of veterinary private practices loan to promote business and organize refresher training to paravets especially on AI, veterinary medicines, handling of surgical cases and laboratory test to increase professional development and promotion of private practices.
4. Department of Livestock Services should focus on agro-forestry extension service especially on the promotion of fodder and forage crops through private paravets despite AI, vaccination, curative treatments etc.
5. There is a need of improve record keeping system by the private paravets in case of AI, vaccination and handling of surgical cases to measure the impact at the community level.
6. The cross visit programme should be organized for the private paravets to exchange of ideas, experiences and replicate innovative technologies.
7. The provision of life insurance to private paravets

should be introduced while handling in the high risk cases.

8. There should be increased linkage and coordination between the District Livestock Service Offices, local level governments and private paravets to strengthen the relationships and ensure quality of services at the community level.

References

- Central Bureau of Statistics CBS) (2011)., *National Report*, National Planning Commission Secretariat, , Kathmandu, Author
- Community Livestock Development Project (CLDP). (2010) Annual Report 2010. Project Management Unit, Kathmandu, Author
- Community Livestock Development Project (CLDP). (2009). *Strategy for promotion of Veterinary Private Practice and Advisory Services under Community Livestock Development Project*. Community Livestock Development Project,, Kathmandu, Author,
- Heffernan, C. and Pilling, D. (2002). *Livestock disease prioritization: Listening to the voices of the poor. In: Responding to the Increasing Global Demand for Animal Products*, Proceedings of British Society of Animal Science International Conference, Merida, Mexico
- Jaishi, M, Nepali, P.B. and Shahi, L. (2018). *Agricultural Extension in Nepal under Federalism*. Delhi: aesa and CRISP.
- Ministry of Agriculture and Cooperatives (MOAC) (1996). *Agriculture Perspective Plan (1996 2016)*. Kathmandu, Author
- Ministry of Agriculture and Cooperatives(MOAC) (2004). *National Agriculture Policy 2061*. Kathmandu, Author
- Ministry of Agriculture and Development (MoAD) (2014). *Statistical information on Nepalese agriculture*, Kathmandu, Author.
- Ministry of Agriculture and Livestock Development MOALD. (2020). Introduction: Ministry of Agriculture and Livestock Development. Retrieved from <https://www.moald.gov.np>
- Paraveterinary worker. (n.d.). *Definitions.net*, . Retrieved from <https://www.definitions.net/definition/paraveterinary+worker>.
- Suvedi, M and McNamara, P. (2012), *Strengthening the Pluralistic agricultural extension system in Nepal, Monitoring and advisory services*. Washington, DC: USAID.
- Thapa, N.B. (2018). *Research Methodology and Dissertation Writing*. Kathmandu: Jana Bikash Pvt. Ltd.
- Thapa, N.B, et.al. (2019), *Midterm Evaluation of Development Support Program in Six Districts of Nepal Supported by German Nepalese Help Association*. Kathmandu: Social Welfare Council and German Nepalese Help Association.
- Thapa, N.B. (2019), *Food Security and Livelihood: How Survive the People in Nepal*. Mauritius: Lambert Academic Publishing.
- Third Livestock Development Project. (2004). *Project Completion Report*. Lalitpur: Project Management Unit, Harihar Bhawan, Nepal.